

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

AN ADJUSTMENT OF)	
RATES OF COLUMBIA)	CASE NO. 8281
GAS OF KENTUCKY, INC.)	

O R D E R

PROCEDURAL BACKGROUND

On July 10, 1981, Columbia Gas of Kentucky, Inc., ("Columbia") filed its notice with this Commission to increase its rates effective August 1, 1981. Columbia, a public utility providing gas service to approximately 113,780 customers in central and eastern Kentucky, requested a general rate increase of 10.8 percent or \$11,652,660 in additional annual revenue. Columbia stated that the additional revenue was necessary to offset increased operating costs as well as increased capital costs.

In order to determine the reasonableness of the request, the Commission, in an Order entered July 28, 1981, suspended the proposed rates for a period of 5 months after August 1, 1981, and held a public hearing November 11, 1981, in the Commission's Offices in Frankfort, Kentucky, following notice given pursuant to the Commission's regulations. The Consumer Protection Division of the Attorney General's Office ("Attorney General"), the sole intervenor in this case, was present and participated in the hearing.

At the hearing, Columbia's counsel moved to strike certain quotes from periodicals included in the Attorney General's witness' prefiled testimony as being hearsay. The Commission is of the opinion that the information was referenced correctly and used only to support the witness' expert opinion and should be included in the evidence of record.

Briefs were filed with the Commission on December 1, 1981, and the entire record, including Columbia's responses to numerous requests for additional information, has been submitted for final determination.

ANALYSIS AND DETERMINATION

Test Period

Columbia proposed and the Commission has accepted the 12-month period ending December 31, 1980, as the test period in this matter. In accordance with Commission policy, pro forma adjustments have been included when found appropriate.

Net Investment

Columbia proposed an end-of-period net investment rate base of \$48,813,099.⁽¹⁾ Subsequent to passage of the Economic Recovery Tax Act of 1981, Columbia reduced its rate base by \$7,624⁽²⁾ to reflect additional deferred taxes applicable to the normalization of the difference in tax depreciation and book depreciation for that portion of construction work in progress included in the rate base and placed in service during

(1) Burchett Exhibit 4, Schedule No. 1.

(2) Irwin Supplemental Exhibit 15, sheet 2 of 5.

the 1981 calendar year. The Commission accepts the normalization method of accounting for timing differences in book and tax depreciation under the new tax act for rate-making purposes and has thus accepted Columbia's proposed adjustment.

The Commission has, moreover, made the following adjustments to Columbia's proposed net investment rate base:

Attrition

Columbia proposed to increase its rate base by \$3,185,840 to reflect the average increase in the gross investment per customer that occurred during the test year. Columbia's witness Mr. Stalnaker agreed on cross-examination that attrition is affected by both positive and negative factors impacting return.⁽³⁾ Columbia's filing reflects the anticipated investment attrition and inflationary increases in expenses and working capital with no offsetting adjustments for anticipated efficiency and productivity improvements. Moreover, Columbia's adjustment for attrition was proposed without a detailed analysis of the level and factors affecting historical attrition experience.⁽⁴⁾ Based on a careful review of the transcript and record, the Commission is of the opinion that, as Columbia failed to make a complete and thorough analysis of expected earnings attrition, it has failed to meet its burden of proof and the adjustment is, therefore, denied.

⁽³⁾ Transcript of Evidence, November 11, 1981, page 85.

⁽⁴⁾ Ibid., page 87.

Prepayments

Columbia, through its wholesale suppliers, Columbia Gas Transmission Corporation and Columbia LNG Corporation, nominates natural and contracts synthetic gas requirements, respectively, primarily during the off-peak season for use during the peak heating season to assure its customers of adequate gas supplies during peak periods. In its notice, Columbia proposed to include a 13-month average of the prepaid balances in gas supplies priced at the current price of gas at the filing date to reflect current working capital requirements. The Commission agrees with Columbia that working capital items must reflect current investment requirements and, with the exception of prepaid Crawford Storage gas fees, has increased the average prepaid gas balances to the current wholesale gas prices at the date of this Order.

The Commission is of the opinion that the average test period working capital investment in the Crawford Storage Field is the appropriate investment to include in prepayments. This storage field inventory is not subject to periodic turnover. Therefore, the average test period balance in the storage account is more representative of future working capital requirements than a balance based on re-valuation of the entire volume at current prices.

The Commission has adjusted the average of the prepaid balances in natural and synthetic gas, with the exception of the Crawford Storage fees, and has increased Columbia's proposed

rate base by \$3,006,486.⁽⁵⁾

The Commission has, moreover, made an additional adjustment to Columbia's proposed rate base of \$983,047⁽⁶⁾ to reflect a reduction in the nominated natural gas requirements resulting from the reduction in sales volumes to Ashland Oil Company, Inc. ("Ashland"). Columbia in its supplemental filing requested that the Commission reduce its revenues and expenses to account for a major loss in sales volume to Ashland. The Commission has made the appropriate reductions to Columbia's operating statement, as discussed in a subsequent section of this Order, and is of the opinion that a corollary reduction in working capital requirements is, therefore, necessary because of the reduction in Columbia's natural gas requirements.

Accumulated Deferred Taxes

Deferred taxes--taxes previously included in Columbia's cost of service but not due to the taxing authorities until some future date--represent a source of cost-free capital to Columbia. In its proposed rate base, Columbia correctly reduced net investment by the balance in deferred taxes arising from the difference between book and taxable depreciation, but failed to deduct the balance in deferred taxes arising from other book and taxable timing differences. At the end of the

⁽⁵⁾ Calculation: Prepayments reflecting November 1, 1981, prices; less proposed prepayments reflecting May 1, 1981, prices (\$18,130,550 - \$15,124,064 = \$3,006,486).

⁽⁶⁾ Calculation: Ashland volume reduction divided by adjusted volume, net of temperature variance and end-of-period adjustments; times nominated prepayments reflecting November 1, 1981, prices (1,784,238 Mcf ÷ 28,945,923 Mcf = .0616 X \$15,958,549 = \$983,047).

test period, Columbia's balance in other deferred taxes was
\$928,747.⁽⁷⁾

The majority of this account, or \$774,104, resulted from the book and taxable timing difference in the expensing of synthetic gas. Synthetic gas is prepaid and charged to expense for tax purposes at 1/12 of the annual contracted volume. For book purposes the prepaid gas is charged to expense on the basis of a total revenue curve using first-in, first-out inventory pricing. Therefore, the timing difference inherent in book and tax treatment of synthetic gas results from both a difference in volume and in price.

As Columbia offered no evidence to indicate that neither the test period revenue curve nor the timing of the wholesale increase in synthetic gas price was abnormal, the Commission is of the opinion that the test period level of deferred taxes from synthetic gas is representative of future deferrals. Therefore, the Commission has reduced Columbia's rate base by the end-of-period balance in this account or \$928,747.

The Commission has made several other adjustments to Columbia's proposed rate base. Working capital has been reduced by \$31,696⁽⁸⁾ to reflect adjustments accepted by the Commission to Columbia's operation and maintenance expenses. In accordance with past policy, the Commission has adjusted the year-end

⁽⁷⁾ Response to staff request, Item No. 4(M).

⁽⁸⁾ $\frac{1}{8}$ of \$12,348,697 = \$1,543,587 - \$1,575,283 = (\$31,696).

balance in accumulated depreciation by \$51,038⁽⁹⁾ to reflect the accepted pro forma adjustments to depreciation expense.

Finally, the Commission has reduced Columbia's proposed rate base by \$10,953,⁽¹⁰⁾ the net book value of its acquisition adjustment. It is the Commission's opinion that it is unfair to require the ratepayers to provide a higher return on utility plant simply because it was purchased at a price above book value. The Commission is of the opinion that the original cost of plant devoted to public service is the appropriate valuation for a determination of revenue requirements.

Thus, the Commission has determined Columbia's net investment rate base to be as follows:

Gas Plant in Service	\$49,969,995
Plant Held for Future Use	2,009
Construction Work in Progress	<u>1,239,386</u>
Total	\$51,211,390
Less:	
Accumulated Depreciation	\$21,972,052
Retirement Work in Progress	25,232
Customer Advances	147,440
Accumulated Deferred Taxes	1,514,926
Pre Job Development - Investment Tax Credits	<u>217,185</u>
Subtotal	<u>\$23,876,835</u>
Add:	
Materials and Supplies	\$ 594,995
Prepayments	17,147,503
Cash Working Capital Allowance	<u>1,543,587</u>
Subtotal	<u>\$19,286,085</u>
Net Investment Rate Base	<u><u>\$46,620,640</u></u>

(9) Burchett Exhibit 7, Schedule No. 3, sheet 1 of 3.

(10) Burchett Exhibit 4, Schedule Nos. 2 and 3.

Revenue And Expenses

Columbia had net operating income of \$3,539,739⁽¹¹⁾ for the test period ended December 31, 1980. In order to reflect current operating conditions, Columbia proposed numerous adjustments to revenues and expenses which resulted in an adjusted test period net operating deficit of \$1,988,664.⁽¹²⁾ The Commission finds that the appropriate adjusted test period net operating deficit is \$2,050,020.

In its analysis of Columbia's operations the Commission found Columbia's proposed pro forma adjustments generally to be proper and has accepted them as proposed with the following exceptions:

Revenue Normalization

Columbia is allowed to recover increases in the cost of gas through a Purchased Gas Adjustment Clause ("PGA"). Columbia proposed to normalize revenue for rates approved in its most recent PGA filing, Case No. 7273-T, Revised, for total gas service revenues of \$110,183,494,⁽¹³⁾ an increase of \$9,611,830 above the test period level. Columbia included in this normalization an adjustment to reflect transfers between rate schedules.

⁽¹¹⁾ Response to staff request, Item 1(a), sheet 5 of 18.

⁽¹²⁾ Stalnaker Exhibit 11, Schedule No. 1.

⁽¹³⁾ Burchett Exhibit 10, Schedule No. 1, sheet 1 of 6.

The Commission finds that the transfer of 392,637 Mcf⁽¹⁴⁾ to rate schedule GSC is inappropriate because too few Mcf were allocated to the rate block for usage in excess of 1,000 Mcf per month. The Commission has redistributed this volume to reflect the appropriate volume in excess of 1,000 Mcf and has proportionately distributed the remainder.

In addition, the Commission in its analysis found that a discrepancy existed in the number of average residential customers served during the test period. In response to questions about this discrepancy Columbia furnished additional information showing that 106 residential customers served under its LG-1 rate schedule had inadvertently been included in rate schedule GSR.⁽¹⁵⁾ The effect of these adjustments is a reduction to Columbia's normalized revenues of \$4,880.

Since the filing of the notice in this case, Columbia has requested and been granted rates to recover additional increases in the wholesale cost of gas. Therefore, the Commission has normalized revenues to reflect the latest PGA rates approved in Case No. 7273-BB. The effect of this adjustment is to increase Columbia's normalized gas service revenues by \$19,637,898 based on normal operating conditions.

(14) Response to staff request, Item 8; Ref. Exhibit 10, sheet 1 of 4.

(15) Response pursuant to request at the hearing held November 11, 1981, Item 9.

Purchased Gas Normalization

Columbia proposed an end-of-period cost of gas of \$96,050,976⁽¹⁶⁾ based on the wholesale rates reflected in Case No. 7273-T, Revised. The Commission has increased the cost of gas to reflect the most recent wholesale rates in Case No. 7273-BB. The effect of this adjustment is to increase Columbia's normalized cost of gas by \$19,340,444 based on normal operating conditions.

Wage and Wage-Related Adjustments

Columbia's test period wages were \$5,799,158. Columbia proposed to normalize wage increases granted during the test period to an end-of-period level resulting in an increase of \$405,996. Columbia also proposed to increase wages to reflect the annualization of wage increases anticipated to occur in 1981 in the amount of \$592,371.⁽¹⁷⁾ The Commission notes that these adjustments are for union and non-union employees, with the union wage increase being known and measurable at 9 percent effective December 1, 1981.⁽¹⁸⁾ However, the pro forma adjustment for the non-union wage increase is prospective and discretionary and thus neither known nor measurable. Columbia's witness Mr. Burchett testified that the relationship between

(16) Burchett Exhibit 1, Schedule No. 2, sheet 5 of 6.

(17) Burchett Exhibit 1, Schedule No. 2, sheet 4 of 6.

(18) Union agreement provided in letter dated November 9, 1981, pursuant to staff request.

the union and non-union wage increases is usually very similar. Columbia further stated in its brief that a comparison of the total wage increases experienced during the test period, with the union wage increase for this period, demonstrated this relationship.

The Commission is of the opinion that the annualization of non-union wages is appropriate but has reduced Columbia's proposed adjustment by \$33,907, to \$558,464,⁽¹⁹⁾ which is commensurate with the 9 percent adjustment for union wages.

The Commission has made a corresponding adjustment to social security taxes ("FICA taxes"), following the procedure proposed by Columbia in proportionately reducing wages in excess of the 1982 FICA tax base of \$32,400. In addition the Commission has found the percentage of wages expensed of 90.23 percent⁽²⁰⁾ to be inappropriate as this factor included wages charged to clearing accounts subsequently capitalized. The appropriate factor is 89.82 percent.⁽²¹⁾ Thus, the Commission has reduced the proposed level of FICA taxes by \$4,382 reflecting both the reductions in wages and the percentage of wages charged to expense.

Postal Increases

Columbia proposed to adjust its operating expenses to reflect the \$0.03 postal rate increase effective March 22,

⁽¹⁹⁾ $\$5,799,158 + \$405,996 = \$6,205,154 \times 9\% = \$558,464.$

⁽²⁰⁾ Response to staff request, Item 8; Ref. Exhibit 3, sheet 1 of 2.

⁽²¹⁾ Columbia's 1980 Annual Report, page 355 ($\$5,888,763 + \$6,556,242 = 89.82\%$).

1981, from \$0.15 to \$0.18, applied to its end-of-period level of customer bills. Counsel for Columbia stipulated that customer bills were mailed under the presorted rate schedule. This schedule increased March 22, 1981, from \$0.13 to \$0.15. Presorted postal rates were increased again November 1, 1981, to \$0.17. Thus, the Commission has adjusted Columbia's operating expenses to reflect both the reduction for the presorted rate schedule and the postal rate increase effective subsequent to the filing of this case. The net effect of these adjustments is an increase in operating expenses of \$13,653.

Uncollectible Accounts

Columbia proposed an adjustment to its operating expenses to reflect estimated uncollectible accounts based on an average of the net charge-offs as a percentage of gas sales revenues for the test year and the 2 prior years.⁽²²⁾ Columbia's witness Mr. Burchett was questioned about the use of a 3-year average because the 1978 percentage of charge-offs was significantly higher than that of 1979 and 1980. Columbia failed to explain the variance in the 3 years. Thus, the Commission finds that it is appropriate to use the test period percentage of charge-offs.

Moreover, in its calculation of uncollectibles, Columbia failed to reflect the adjustments for temperature variance and end-of-period customers and to the billing analysis. Based on

⁽²²⁾ Response to staff request, Item 8; Ref. Exhibit 1, adj. 5.

adjustments to these items, the Commission finds uncollectibles to be \$150,233, a reduction of \$71,443 from Columbia's proposed level. The Commission has further adjusted uncollectible accounts to reflect decreased revenues resulting from reduced sales to Ashland and the normalized level of revenues resulting from the approval of PGAs subsequent to the filing date. The net effect of this adjustment is to increase operating expenses by \$19,291.

An adjustment for uncollectible accounts applicable to increased revenue requirements granted has been made in a subsequent section of this Order.

Residential Conservation Services

Columbia proposed to adjust its operating expenses by \$221,918 to reflect the implementation of the Residential Conservation Services ("RCS") Program in 1981.⁽²³⁾ As the Commission has not issued its final recommendations for the RCS Program, it has denied the entire adjustment, thus reducing Columbia's proposed operating expenses, by \$221,918.

Fuel Cost

Columbia adjusted its operating expenses to reflect estimated increases in fuel cost applicable to auto, truck and power equipment. The proposed adjustment was based on the test period usage of gasoline and diesel fuel at \$1.50 per gallon for gasoline and \$1.45 per gallon for diesel fuel. In response

(23) Burchett Exhibit 1, Schedule No. 2, sheet 2 of 6.

to a request for its latest contract rates for fuel, Columbia furnished the average cost for all fuel in October 1981, which was \$1.43 per gallon.⁽²⁴⁾ Thus, Columbia's proposed fuel cost adjustment has been reduced by \$10,732.

Institutional Advertising

Columbia proposed to adjust advertising expenses by \$12,909 to eliminate institutional advertising disallowed by the Commission's regulations. However, the Commission found that an additional \$2,559 in institutional advertising was reclassified to another account for reporting purposes⁽²⁵⁾ and has reduced Columbia's operating expenses by this amount.

Lobbying Expenses

In response to the Commission's request, Columbia showed that \$3,497 in lobbying expenses for salaries, dues, memberships and expenses were allocated to Kentucky operations from the parent corporation during the test period.⁽²⁶⁾ Consistent with past policy, the Commission has eliminated these expenses from the ratepayers' cost of service. Absent specific proof quantifying the benefits received by ratepayers, lobbying expenses should be borne by the stockholders.

(24) Response pursuant to request at hearing held November 11, 1981, Item 5.

(25) Response to staff request, Item 16(b), sheet 6 of 7.

(26) Response to staff request, Item 18.

Temperature Adjustment

Because of colder than normal weather conditions during the test period, Columbia's purchases and sales of gas were greater than normal. In order to reflect the estimated revenue and purchased gas costs for a normal "weather" year, Columbia proposed adjustments to reduce gas sales revenue by \$4,904,059 and purchased gas costs by \$3,527,688, a net increase to the cost of service of \$1,376,371. (27)

After reviewing these adjustments, the Commission finds that the average rate applicable to general service customers included usage and revenue for minimum bill customers. Columbia's witness Mr. Burchett, when questioned regarding this procedure, concurred that minimum bills should not be included when determining the reduction in gas revenues.

Moreover, the Commission finds that the appropriate procedure to use in the determination of a reduction in gas revenues is to apportion the reduction in volume to all blocks of the applicable GSR and GSC rate schedules. The Commission has determined that of the reduction in volume of 1,293,747 Mcf, 870,653 Mcf should be applied to the GSR schedule and 423,294 Mcf to the GSC schedule. Thus, the Commission finds that gas revenues should be reduced by only \$4,461,871 and has reduced Columbia's proposed cost of service level by \$442,188.

(27) Burchett Exhibit 8.

End-Of-Period Customer Adjustment

Columbia proposed an adjustment to reflect estimated additional revenues of \$1,045,122 and estimated additional costs of purchased gas of \$752,622 to serve customers at the end-of-period customer level.⁽²⁸⁾ The Commission agrees that an adjustment to reflect end-of-period customers is appropriate. However, Columbia's calculations were based on sales volumes during the test period prior to the adjustment for temperature variance. The Commission employed a similar procedure in its calculation, using sales volumes normalized for temperature variance rather than actual sales volumes. This resulted in 107,459 Mcf estimated additional sales for residential customers and 150,748 Mcf for commercial and industrial customers. The Commission has apportioned these volumes to the appropriate rate schedules resulting in a \$62,035 reduction to Columbia's proposed revenue adjustment and a corresponding \$48,672 reduction to purchased gas cost. The net effect of these reductions was to increase cost of service by \$13,363.

Assessment Fees

Columbia proposed an adjustment to reflect the estimated additional Public Service Commission assessment fee on an end-of-period basis. The Commission concurs with this adjustment. Further adjustments have been made to reflect the reductions in adjusted revenues for temperature variance, end-of-period customers, and changes in the billing analysis. The net result of these adjustments is to reduce the assessment fee by \$3,624.

⁽²⁸⁾ Burchett Exhibit 7, Schedule No. 2.

In addition, the Commission has adjusted the assessment fee to reflect the reduction in revenues resulting from a reduction in sales to Ashland, and the most recent PGA rates. The net effect of these adjustments is to increase the cost of service by \$10,961.

Economic Recovery Tax Act of 1981

Columbia filed a supplemental exhibit to reflect normalized tax accounting for that portion of construction work in progress included in the rate base. As stated earlier, the Commission concurs with the supplemental exhibit and has adjusted expenses accordingly by \$8,161. (29)

Ashland Oil, Inc.

Subsequent to the test period, Ashland advised Columbia that it intended to limit its purchases to 60,000 Mcf per month or 720,000 Mcf per year compared to the test period purchases of 2,504,238 Mcf. The impact of this reduction in sales is a reduction to gas sales revenues of \$5,936,921, a reduction to gas purchases of \$4,864,368 and a net reduction to Columbia's proposed net operating income of \$1,072,553 prior to the effect of income taxes. (30)

Interest Charges

Columbia proposed interest charges of \$1,989,901 based on the consolidated Columbia System's debt ratio and embedded cost of debt at March 31, 1981, applied to Columbia's proposed original

(29) Irwin Supplemental Exhibit 15, sheet 1 of 5.

(30) Updated response to staff request, Item 26, Exhibit RGS 1, sheet 1 of 4.

cost rate base. Applying the same procedure to its adjusted rate base and the debt ratio and embedded cost of debt at September 30, 1981, the Commission finds interest charges to be \$2,009,916. (31)

Income Taxes

As the Commission's determination of Columbia's adjusted operating income less interest expense results in a net loss for the adjusted test period, the Commission will calculate income taxes in a subsequent section of this Order based on the level of net income required following the increase. Income taxes for the adjusted test period, prior to increase, will be stated at zero, as negative income tax expense is misleading.

Therefore, the Commission finds that Columbia's adjusted test period operations are as follows:

	<u>Columbia Adjusted</u>	<u>Commission Adjustments</u>	<u>Ashland Oil Decrease</u>	<u>Commission Adjusted</u>
Revenues	\$110,243,330	\$16,135,875	\$ (5,936,921)	\$120,442,284
Expenses	112,231,994	15,124,678	(4,864,368)	122,492,304
	<u>\$ (1,988,664)</u>	<u>\$ 1,011,197</u>	<u>\$ (1,072,553)</u>	<u>\$ (2,050,020)</u>
AFUDC	0	18,359	0	18,359
Operating				
Income	<u>\$ (1,988,664)</u>	<u>\$ 1,029,556</u>	<u>\$ (1,072,553)</u>	<u>\$ (2,031,661)</u>
Interest	<u>1,989,901</u>	<u>20,015</u>	<u>0</u>	<u>2,009,916</u>
TOTAL	<u><u>\$ (3,978,565)</u></u>	<u><u>\$ 1,009,541</u></u>	<u><u>\$ (1,072,553)</u></u>	<u><u>\$ (4,041,577)</u></u>

Rate of Return

All of Columbia's capital requirements are provided by the parent company. Columbia's witness Mr. O'Donnell proposed to use Columbia Gas System's ("System") consolidated capital

(31) Burchett Exhibit 5, Schedule No. 3.

structure and embedded capital costs as of September 30, 1981.⁽³²⁾
The Attorney General's witness, Dr. Legler, also proposed using System's consolidated capital structure. He recommended using the most current capital structure and embedded cost rates available.⁽³³⁾ The embedded debt cost of 8.82 percent includes \$60 million borrowed under a revolving credit arrangement at an interest rate of 19.42 percent. The interest rate on the revolving credit arrangement fluctuates with the prime rate and includes a commitment fee on the \$200 million line of credit. Over the past 12 months the bank prime rate has averaged 19.2 percent.⁽³⁴⁾

Mr. O'Donnell proposed an 11.97 percent cost rate for preferred stock, including the amortization of the cost of redeeming the 11-1/4 percent Series A preferred stock on November 1, 1979. Dr. Legler recommended excluding the redemption costs because they should have been treated as an adjustment to retained earnings. The early redemption of the preferred stock issue benefitted the ratepayer by reducing System's after-tax cost of capital. The Commission is of the opinion that the September 30 capital structure of 48.88 percent debt, 1.72 percent preferred stock, and 49.40 percent common equity and the embedded costs of 8.82 percent for debt and 11.97 percent for preferred stock are reasonable and should be adopted for the purpose of determining the cost of capital in this case.

(32) O'Donnell Exhibit 13.

(33) Legler testimony, page 8.

(34) Average prime rate for 12 months ended October 1981, Federal Reserve Statistical Release.

Columbia requested a 16 percent rate of return on common equity. Mr. O'Donnell used two methods to estimate the cost of common equity, an equity premium approach and a comparative earnings approach.⁽³⁵⁾ His equity premium approach resulted in a range of cost rates of 14.95 percent to 16.98 percent. His comparative earnings approach gave a total range of 13.67 percent to 15.63 percent. Dr. Legler used discounted cash flow and comparable earnings methods to estimate the cost of equity capital. He discussed the equity risk premium method and concluded that "it should not stand on its own, but be used, if at all, in conjunction with other estimating techniques."⁽³⁶⁾ Dr. Legler's analysis produced an overall range of 13.5 percent to 17.5 percent.⁽³⁷⁾ He indicated that 15.5 percent was a reasonable point estimate of the cost of equity.

The Commission is of the opinion that a range of returns on common equity of 14 percent to 15.5 percent is fair and reasonable. The Commission has determined that a return on equity in this range would not only allow Columbia to attract capital at reasonable costs to insure continued service and provide for necessary expansion to meet future requirements, but also would provide for the lowest possible cost to the ratepayer.

⁽³⁵⁾O'Donnell testimony, Schedule No. 7.

⁽³⁶⁾Legler testimony, page 19.

⁽³⁷⁾Transcript of Evidence, November 11, 1981, page 119.

System's common equity ratio has increased from 40 percent in 1976 to 49.4 percent on September 30, 1981.⁽³⁸⁾ The Commission is of the opinion that this increase has reduced System's financial risk and has considered this reduced risk in its determination of this range of returns. Within this range of returns the Commission finds that a return on common equity of 14.75 percent will best attain the above objectives.

Thus the overall rate of return in this case is 11.80 percent.

Revenue Requirements

The required net operating income, based on the rate of return on net investment of 11.80 percent found fair, just and reasonable, is approximately \$5,501,236.⁽³⁹⁾ To achieve this level of operating income, Columbia is entitled to increase its rates and charges to produce additional revenues on an annual basis of \$10,745,698, determined as follows:

Calculation of Increase

Adjusted Operating Expenses		\$ 122,516,031 ⁽⁴⁰⁾
Adjusted Income Tax Expenses		3,189,074
Required Net Operating Income	\$5,501,236	
Less: AFUDC	<u>18,359</u>	
Subtotal		<u>5,482,877</u>
Operating Revenues Required		\$ 131,187,982
Less:		
Adjusted Operating Revenues		<u>\$ 120,442,284</u>
Revenue Deficiency		<u>\$ 10,745,698</u>

⁽³⁸⁾ O'Donnell Exhibit 13 and Response to staff request, Item 28.

⁽³⁹⁾ \$46,620,640 X 11.80% = \$5,501,236.

⁽⁴⁰⁾ Includes uncollectible accounts and assessment fees of \$23,727 (\$10,745,698 X .002208 = \$23,727).

The calculation of the Commission's determination of Columbia's adjusted income tax expense of \$3,189,074 is found in Appendix B to this Order.

Profits on Sales From Prepaid Gas

As discussed above, Columbia prepays its wholesale suppliers, Columbia Gas Transmission Corporation and Columbia LNG Corporation, two other subsidiaries of the System, for natural and synthetic gas. Columbia owns this gas although it neither holds nor stores it.

Natural and synthetic gas purchased from suppliers is prepaid during off-peak usage periods and withdrawn from storage to meet peak usage during the winter heating season. Therefore, a lag exists between the date Columbia prepays for nominated gas and the date it is sold to its customers.

Columbia, which uses the first-in, first-out method of pricing, assigns the earliest price of gas to gas transferred from the prepaid account. However, Columbia charges its customers the rates in its tariffs in effect at the time the gas is withdrawn from storage which include those approved in its most recent PGA filing. Since the PGA rate is designed to allow recovery of 100 percent of the current increase in the cost of gas purchased, Columbia is recovering more than the cost of gas transferred from prepayments through these rates.

As the cost of natural gas continues to increase, it appears to the Commission that the cost of gas transferred from prepayments will be lower than the cost per Mcf included in Columbia's base rates. The Commission concludes, therefore,

that a hearing should be held to determine the extent that this over-recovery is occurring and if Columbia should be required to refund to its customers profits on sale from prepayments.

Revenue Allocation and Rate Design

Columbia proposed to allocate any revenue increase by applying approximately equal increases to all rate blocks of all rate schedules. The Attorney General did not propose an alternative method of revenue allocation or any rate design changes. The Commission is of the opinion that the proposed method of revenue allocation is reasonable and should be approved in this case.

SUMMARY

The Commission having considered the evidence of record and being advised, is of the opinion and finds that:

(1) The rates proposed by Columbia would produce revenues in excess of the revenues found reasonable herein and should be denied upon application of KRS 278.030.

(2) The rates and charges in Appendix A, attached hereto and made a part hereof, will produce gross annual operating revenues of approximately \$131,187,982 and are the fair, just and reasonable rates and charges in that they will allow Columbia to pay its operating expenses, service its debt and provide a reasonable amount of surplus for equity growth.

(3) Beginning with October 1, 1980, Columbia should be required to calculate profits on sales from gas transferred from prepayments and should accumulate the profits and record them in Account 253, Other Deferred Credits. Further, a hearing

should be held to allow Columbia and other interested parties to present testimony regarding profits on sales from prepayments.

IT IS THEREFORE ORDERED that the rates proposed by Columbia Gas of Kentucky, Inc., in its application be and they hereby are denied upon application of KRS 278.030.

IT IS FURTHER ORDERED that the rates and charges in Appendix A be and they hereby are approved as the fair, just and reasonable rates and charges to be charged by Columbia for service rendered on and after January 1, 1982.

IT IS FURTHER ORDERED that Columbia shall file with this Commission, within 30 days of the date of this Order, its revised tariff sheets setting out the rates and charges approved herein.

IT IS FURTHER ORDERED that Columbia shall accumulate profits on sales from prepayments in the manner set forth in finding number 3 of this Order.

IT IS FURTHER ORDERED that a hearing be and it hereby is set on April 14, 1982, at 9 o'clock a.m., Eastern Standard Time, in the Commission's offices at Frankfort, Kentucky, solely for the purpose of allowing Columbia and other interested parties an opportunity to present testimony regarding profits on sales from prepayments.

IT IS FURTHER ORDERED that on or before March 1, 1982, Columbia shall file with the Commission a schedule showing the number of Mcf and breakdown of cost per Mcf of the beginning balance, additions, reductions and ending balance in prepaid gas

for each month during the period October 1, 1980, through September 30, 1981.

IT IS FURTHER ORDERED that Columbia shall file, on or before March 1, 1982, a schedule showing the amount included in its base rates and its PGA rates to recover the cost of gas from its customers during each month for the period October 1, 1980 through September 30, 1981.

Done at Frankfort, Kentucky, this 30th day of December 1981.

PUBLIC SERVICE COMMISSION

Marilyn M. Vohy
Chairman

Katherine Randall
Vice Chairman

Sam Carizon
Commissioner

ATTEST:

Secretary

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 8281 DATED DECEMBER 30, 1981.

The following rates and charges are prescribed for the customers in the area served by Columbia Gas of Kentucky, Inc. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under authority of this Commission prior to the date of this Order.

GENERAL SERVICE RATE SCHEDULE - GS-Residential

Rate

First	1 Mcf, or the right thereto used through each meter each month	\$ 6.054
Next	49 Mcf used through each meter each month - per Mcf	4.778
Next	50 Mcf used through each meter each month - per Mcf	4.728
Next	100 Mcf used through each meter each month - per Mcf	4.698
Next	800 Mcf used through each meter each month - per Mcf	4.668
All Over 1,000	Mcf used through each meter each month - per Mcf	4.648

Minimum Monthly Charge

The minimum charge per month shall be \$6.05.

GENERAL SERVICE RATE SCHEDULE - GS-Commercial and Industrial

Rate*

First	1 Mcf, or the right thereto used through each meter each month	\$ 6.279
Next	49 Mcf used through each meter each month - per Mcf	4.929
Next	50 Mcf used through each meter each month - per Mcf	4.879
Next	100 Mcf used through each meter each month - per Mcf	4.849
Next	800 Mcf used through each meter each month - per Mcf	4.819
All Over 1,000	Mcf used through each meter each month - per Mcf	4.799

Minimum Monthly Charge

The minimum charge per month shall be \$6.28.

RATE SCHEDULE FC-1

FIRM AND CURTAILABLE GAS SERVICE - OPTIONAL

Rate*

Firm Volume (Daily Firm Volume Times Number of Days in Month)

First 1,000 Mcf per month @ \$4.730 per Mcf
Over 1,000 Mcf per month @ \$4.680 per Mcf

Curtable Volume

\$4.530 per Mcf of Curtable Volume of gas delivered hereunder each billing month.

Availability of Excess Gas

In the event Buyer shall desire to purchase on any day gas in excess of Buyer's specified Maximum Daily Volume, Buyer shall inform the Seller and if the Seller is able to provide such excess gas required by Buyer from its operations, Seller shall make such excess gas available at the rate of four dollars fifty-three and no tenths cents (\$4.530) per Mcf.

If such excess gas cannot be made available to Buyer from Seller's own operations, Seller may comply with such request to the extent that excess gas is temporarily available from Seller's gas supplier, in order to provide gas which otherwise would not be available. Such excess volume taken shall be paid for at the rate of three dollars and ninety-one cents (\$3.91) per Mcf.

On any day when Buyer has been notified to curtail deliveries, Buyer may request excess gas and to the extent such excess gas can be obtained from Seller's supplier, Buyer shall pay Seller at the rate of three dollars and ninety-one cents (\$3.91) per Mcf for all such volumes taken which would otherwise not be available.

RATE SCHEDULE FI-1
FIRM AND INTERRUPTIBLE GAS SERVICE - OPTIONAL

Rate*

Daily Firm Volume

First 5,000 Mcf per month @ \$4.677 per Mcf

Over 5,000 Mcf per month @ \$4.647 per Mcf

Daily Interruptible Volume

\$4.467 per Mcf of Daily Interruptible Volume of gas delivered hereunder each billing month.

Availability of Excess Gas

In the event Buyer shall desire to purchase on any day gas in excess of Buyer's specified Maximum Daily Volume, Buyer shall inform the Seller and if the Seller is able to provide such excess gas required by Buyer from its operations, Seller shall make such excess gas available at the rate of four dollars forty-six and seven tenths cents (\$4.467) per Mcf.

If such excess gas cannot be made available to Buyer from Seller's own operations, Seller may comply with such request to the extent that excess gas is temporarily available from Seller's gas supplier, in order to provide gas which otherwise would not be available. Such excess volume taken shall be paid for at the rate of three dollars and ninety-one cents (3.91) per Mcf.

On any day when Buyer has been notified to interrupt deliveries, Buyer may request excess gas and to the extent gas can be obtained from Seller's supplier, Buyer shall pay Seller at the rate of three dollars and ninety-one cents (\$3.91) per Mcf for all such volumes taken which would otherwise not be available.

RATE SCHEDULE FI-2
FIRM AND INTERRUPTIBLE GAS SERVICE - OPTIONAL

Rate*

Daily Firm Volume

First 50,000 Mcf per month @\$4.577 per Mcf

Over 50,000 Mcf per month @\$4.507 per Mcf

Daily Interruptible Volume

\$4.417 per Mcf of Daily Interruptible Volume of gas delivered hereunder each billing month.

Availability of Excess Gas

In the event Buyer shall desire to purchase on any day gas in excess of Buyer's specified Maximum Daily Volume, Buyer shall inform the Seller and if the Seller is able to provide such excess gas required by Buyer from its operations, Seller shall make such excess gas available at the rate of four dollars forty-one and seven tenths cents (\$4.417) per Mcf.

If such excess gas cannot be made available to Buyer from Seller's own operations, Seller may comply with such request to the extent that excess gas is temporarily available from Seller's gas supplier, in order to provide gas which otherwise would not be available. Such excess volume taken shall be paid for at the rate of three dollars and ninety-one cents (\$3.91) per Mcf.

On any day when Buyer has been notified to interrupt deliveries, Buyer may request excess gas and to the extent such excess gas can be obtained from Seller's supplier, Buyer shall pay Seller at the rate of three dollars and ninety-one cents (\$3.91) per Mcf for all such volumes taken which would otherwise not be available.

RATE SCHEDULE IS-1
INTERRUPTIBLE GAS SERVICE - OPTIONAL

Rate*

Billing Months April Through November

\$4.879 per Mcf for all volumes delivered each month up to and including the Average Monthly Winter Volume. The Average Monthly Winter Volume shall be one-fourth of the total delivery during the preceding billing months of December through March.

\$4.479 per Mcf for all volume delivered each month in excess of the Average Monthly Winter Volume.

Billing Months December Through March

\$4.879 per Mcf delivered.

RATE SCHEDULE IUS-1
INTRASTATE UTILITY SERVICE

Rate

For all gas delivered each month \$4.512 per Mcf.

Minimum Monthly Charge

The Maximum Daily Volume specified in the Sales Agreement multiplied by \$4.512 per Mcf.

PURCHASED GAS ADJUSTMENT

F. Base Rates

Columbia Gas Transmission Corporation

<u>Zone 1</u>	<u>Demand</u>	<u>Commodity</u>
CDS	\$2.43	272.63¢
WS		
Demand	\$0.95	
Winter Contract Quality	1.42¢	
<u>Zone 3</u>		
CDS	\$2.43	272.63¢
WS		
Demand	\$0.95	
Winter Contract Quality	1.42¢	

Columbia LNG Corporation

LNG	\$4.79
Transportation	27.43¢

Columbia Gas Transmission Corporation

<u>Crawford Storage Service</u>	<u>Demand</u>
Storage Service Quantity	4.63¢
Quantity Injected	.24¢
Quantity Withdrawn	.24¢
Quantity Transportation	15.56¢
Fuel and Gas Lost Percentage	2.47%

APPENDIX B

Required Net Operating Income		\$5,482,877
Less:		
Interest Charges	\$2,009,916	
Net Deduction From		(1)
Income	82,774	
Amortization of ITC	29,859	
Surtax Exemption	20,695	(2)
Total Deductions		<u>\$2,143,244</u>
Subtotal		\$3,339,633
Divided by (1 - 49.24%)	(3)	50.76%
Taxable Income		\$6,579,261
Combined Income Tax Rate		49.24%
Income Taxes		\$3,239,628
Less:		
Surtax Exemption	\$ 20,695	
Amortization of ITC	<u>29,859</u>	
Subtotal		<u>\$ 50,554</u>
		<u>\$3,189,074</u>

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- | | | |
|-----|--|-----------------|
| (1) | Depreciation Expense Straight Line | \$(1,739,605) |
| | Depreciation Expense - Declining Balance | 1,758,946 |
| | Taxes Capitalized | 40,015 |
| | Interest on Customer Deposits | 39,992 |
| | Required Tax Normalization | <u>(16,574)</u> |

Net Deduction From Income	<u>\$ 82,774</u>
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- (2) Combined surtax exemption on income less than \$100,000 based on rates effective January 1, 1982.
- (3) Combined federal and state income tax rate on income in excess of \$100,000.